

INTERNATIONAL SEARCH REPORT

Inte _ _ _ 31 Application No
PCT/US2004/035203

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01J29/87 H01J29/86 H01J29/88

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 166 211 A (STEL MARINUS ET AL) 19 January 1965 (1965-01-19)	1,6, 15-17, 22,29
Y	column 2, line 29 - column 3, line 25	1-3, 8-11, 15-20
X	GB 988 182 A (THORN-A.E.I. RADIO VALVES AND TUBES LIMITED) 7 April 1965 (1965-04-07) page 2, lines 55-115	1,6, 15-17, 22,29
X	US 2002/079825 A1 (VAN DEN BRINK JAN P ET AL) 27 June 2002 (2002-06-27) abstract page 2, paragraphs 15,22,23	22
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

2 May 2005

Date of mailing of the international search report

31/08/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 383 000 A (POWELL DARYL E ET AL) 14 May 1968 (1968-05-14) column 4, lines 23-67 column 5, line 20 - column 6, line 51	22
A		1,7
Y	EP 0 366 090 A (ASAHI GLASS COMPANY LTD) 2 May 1990 (1990-05-02) page 2, line 29 - page 3, line 24 example 4	1-3, 8-11, 15-20
A	US 2003/038582 A1 (SUGAWARA TSUNEHICO ET AL) 27 February 2003 (2003-02-27) page 1, paragraphs 1-6,9 claim 1	1-3,9, 18-20, 23,24

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US2004/035203

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3166211	A	19-01-1965	CH 394407 A DE 1162493 B FR 1304946 A GB 929090 A	30-06-1965 06-02-1964 28-09-1962 19-06-1963
GB 988182	A	07-04-1965	NONE	
US 2002079825	A1	27-06-2002	BR 9904852 A DE 69916959 D1 EP 0993682 A1 WO 9946796 A1 JP 2001525116 T TW 395555 Y	18-07-2000 09-06-2004 19-04-2000 16-09-1999 04-12-2001 21-06-2000
US 3383000	A	14-05-1968	NONE	
EP 0366090	A	02-05-1990	JP 2301944 A JP 2808665 B2 JP 2114435 A JP 2126540 A JP 2124982 A EP 0366090 A2 EP 0367269 A2 US 5045751 A	14-12-1990 08-10-1998 26-04-1990 15-05-1990 14-05-1990 02-05-1990 09-05-1990 03-09-1991
US 2003038582	A1	27-02-2003	CN 1380680 A DE 10215965 A1 GB 2379081 A ,B JP 2002373606 A	20-11-2002 21-11-2002 26-02-2003 26-12-2002